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Issue Number 10

NATURAL AREAS NEWSLETTER

April 1990

Naturally Yours

The Natural Areas Program is sponsored by Alberta Forestry, Lands and Wildlife

FIRST VOLUNTEER STEWARD CONFERENCE POEM

Please read through this rappin' rhyme,
cause it will tell you 'bout a real good time,
and may just help you get off the fence.
Talking 'bout the Volunteer Steward Conference.

Three rad themes dominate the scene,
you'll learn so much it'll make you scream.
"Site Management Skills" will lead the way,
"Working With People Skills" will make your day

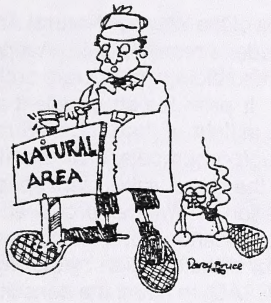
We've got "Field Identification Skills" too,
There's also a whole lot more to do.

We've got games, speakers and a wild book sale,
Get off your hiney, don't be a snail.

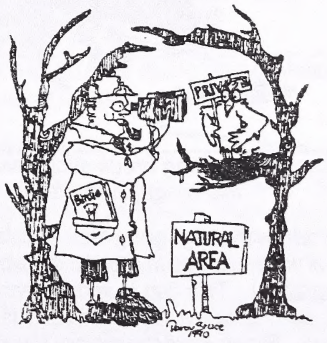
Register now and don't be late.
I hope y'all remember the date.
April 27th to the 29th,
We'll do it up right, we'll do it up fine.

The Strathcona Wilderness Centre will be the place to be
Whether you come alone or with your Society.
This is a conference you should attend.
You'll meet lots of people - maybe a new friend!.

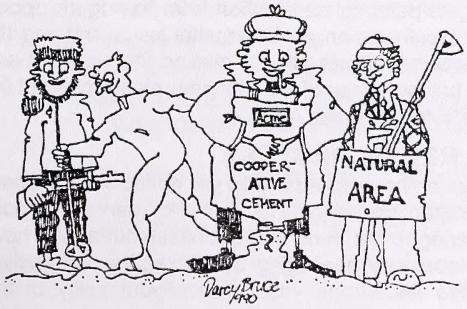
CONFERENCE BRIEF (APRIL 27 - 29, 1990)



"Site Management" is one particular area you may want to "sharpen" your skills in. Have you ever visited your Natual Area and wondered how to conduct a thorough site investigation? Have you ever thought about a special project for your Natural Area but weren't quite sure how to get started? The sessions slated for this theme will answer these and other questions you may have regarding site management. Topics to be covered range from site inventory skills to developing site management plans to trail development and maintenance. Be an eager beaver and enhance your skills in some of these areas.



My field identification skills are so poor that when I was asked to look for a moose I started looking for my favorite chocolaty dessert. Under the "**Field Identification Skills**" theme are such topics as birdwatching, plant identification and moss and fern identification. After participating in these sessions you'll be so skilled at identification your local police detachment will want to recruit you for their missing persons branch!



"**Working with People Skills**" focuses on the proper use of "cooperative cement" while at the same time avoiding "sticky situations". (I know, this joke doesn't quite "hold together.") Sessions will include conflict resolution, legal liability and managing people and site emergencies. These sessions are designed to strengthen your communication and cooperation skills thus fortifying the "cement ." (see insert for more details)

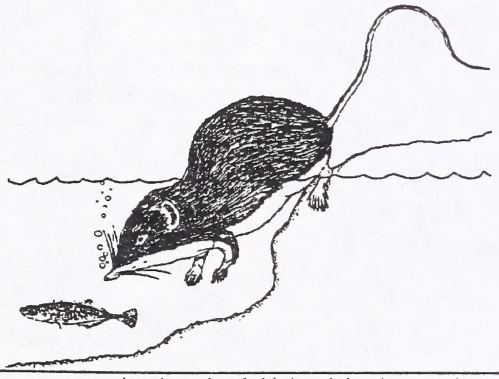
Special thanks go to Darcy Bruce, the talented young artist who sketched these cartoons. Darcy is a Grade 8 student who attends Vernon Barford Junior High School in Edmonton.

THE WATER SHREW: FISHERMAN OF THE WAGNER NATURAL AREA

by Wayne Roberts, Museum of Zoology, University of Alberta
(This article, based on a predator/prey study by the author, is reprinted with permission from the Wagner Natural Area Society Newsletter)

The American water shrew (Sorex palustris), the smallest aquatic mammal found in Alberta, lives but is seldom seen in the wetlands of the Wagner Natural Area. This is because of its small size (about 150 mm total length) and also because, when foraging, it scurries through dense riparian vegetation and slips quietly in and out of water. Rarely, it may be seen swimming on the surface or, less frequently, running on the water's surface on a cushion of air bubbles trapped beneath the hairy fringes of its feet (perhaps when it crosses a small expanse of open water in haste).

Shrews are, strictly speaking, insectivores (Order Insectivora) with teeth adapted for eating insects. In addition to insects, water shrews will include in their diet invertebrates such as snails and crustaceans, perhaps supplemented by tadpoles, small frogs and toads. Like other carnivorous animals, they will also eat carrion which may include other animals as large as themselves, such as microtine rodents and even other water shrews. It is unlikely that water shrews prey on larger animals because of the expense of energy it would require, as well as the risk that would be involved in attacking large prey when such an abundance of smaller prey (primarily invertebrates) is available.



The unsuspecting brook stickleback is about to become this hungry water shrew's next meal.

One relatively large prey item that is frequently found in the diet of water shrews in Alberta is the brook stickleback (Culaea inconstans). This fish is widespread, often locally abundant and, as it is not a fast swimmer, is easily caught by water shrews. Brook sticklebacks are found in the creek and beaver dams within the Wagner Natural Area and may represent an important component of the water shrew diet during the winter. These fish may be restricted to deep pools or move to areas where oxygen levels are greatest, such as near springs, beaver dam outflows or lodges where beaver activity keeps some water open.

The aggregations of brook sticklebacks provide an abundance of food for the water shrew. Water shrews make only brief excursions into the water (usually measured in seconds) so that they do not lose too much body heat, yet they can quickly

(continued on page 4)

PROGRAM NOTES

REPORT SNAPSHOTS

Several reports have recently been completed for Natural an Protected Areas by consultants. This is a synopsis of a few o the recent ones.

The "**Pilot Project on the Study of the Western Hognose Snake in Alberta**" (W. Smith and C. Wershler, December 1989) details methods of locating this rare species in Alberta and assesses the effectiveness of live-trapping in population studies. The poor live-trapping results from the 1989 field season were thought to be a result of the continuing drought in southeastern Alberta. This climatic condition caused a significant decline in populations of great plains toad and plains spadefoot, both major food species for western hognose snake. The report recommends that additional research and monitoring of this rare species be initiated. This study was funded cooperatively by Alberta Fish and Wildlife and Natural and Protected Areas.

Deirdre Griffiths recently completed, under contract, a detailed biophysical survey of **North Cooking Lake Natural Area**, east of Sherwood Park. Deirdre recorded 292 vascular plant, 28 mammal, 141 bird (85 nesting), 4 amphibian and 1 reptile species on this 173 ha site. An interesting component of the study was an historical overview of land use and development in the local area. Comparison of recent aerial photos with 1923 photos dramatically illustrate the loss of habitat and the increasing significance of areas such as the North Cooking Lake site.

One of the many special features of the **Wagner Natural Area** west of Edmonton, is the bog adder's-mouth orchid. A report, detailing the status, distribution and biology of this rare orchid, has recently been completed. It provides an excellent and timely overview of the species, in light of the proposed road development in the area. Although circumpolar in distribution, the bog adder's-mouth is likely the rarest viable plant species in Alberta. The largest population at Wagner produced 13 flowering individuals in 1989. Its presence along the proposed road right-of-way is a main factor in the decision by the Wagner Study Advisory Group (WAGSAG) to direct the consultant preparing the environmental assessment, Richard Spencer and Associates, to study alternative alignments.

PROGRAM TIDBITS

The Volunteer Steward Program was profiled on CBC Radio's noon-hour show on Friday, January 12, 1990. **Alice Hendry**, Wagner Natural Area Society, interviewed by CBC's Cheryl Croucher, provided a personal view of why she is involved in the Volunteer Steward Program. As with many of our volunteers, Alice gets personal satisfaction from having an opportunity to act locally on an environmental issue and see the direct results of her efforts. If you missed the program and would like to borrow a tape of the interview, please contact the Natural and Protected Areas office.

REDUCE, REUSE, RECYCLE

With this issue of the newsletter, you will notice several changes as the program strives to be more environmentally responsible by adhering to the three "R"s of conservation. We have *reduced* unnecessary packaging by eliminating the mailing envelope. We encourage you to pass your copy of the

(continued on page 4)

CONTROLLING WEEDS ON OUR NATURAL AREAS

by Heather Gerling, Biologist, Natural & Protected Areas.

A weed is defined as a plant that is not valued where it is growing and tends to overgrow or choke out more desirable plants. Many of the weeds in Alberta were introduced from other continents, either by accident or by design. During settlement, seed brought from Europe often contained some weed seeds. Some of our weeds, such as toadflax, were even imported as garden ornamentals! Today, weed control on Natural Areas can become a "thorny" issue unless it is addressed promptly and with due care and planning. It is hoped that this article will guide you when making decisions about when weed control is necessary and how to go about it.

HOW DO I FIND OUT IF MY NATURAL AREA HAS A WEED PROBLEM?

- Familiarize yourself with the restricted weeds (which must be destroyed) and noxious (problem) weed species in your area. A trip to your local District Agriculturist's office to pick up reference materials is a great place to start. Their staff are also experienced in weed identification and will be happy to identify any potential weeds that you bring to them. Plant samples can be stored in plastic bags in the freezer prior to identification, put in a plant press or pressed in a book. Samples should include foliage, roots, flowers and seeds where possible. Full colour photographs of restricted and noxious weeds, showing seeds, flowers, mature and immature growth, are available (free of charge) from the Crop Protection Branch, Alberta Agriculture.
- Examine your Natural Area and adjacent lands for restricted and noxious weeds.
- Record the weed species present and their approximate density (e.g., number of plants or size of a patch).
- Record on your disturbance map the location of the weeds in relation to sensitive features of the Natural Area, e.g., watercourses, wetlands, slopes, wildlife travel corridors.
- Determine soil texture, e.g., sand, clay. Your local land resource agrologist (Public Lands Division) may already have this information.
- If there are wellsites, pipelines or power lines on the Natural Area, check with the companies involved as to whether they have had weed problems in the past and what method has been used to control them.
- List any potential negative effects that controlling the weed might have on the ecology of the area.

WHAT IS THE BEST TIME FOR DESTROYING/CONTROLLING THE WEED(S)?

- Good timing is essential for an effective treatment, whether it be mechanical, biological or chemical. With proper timing you can do the following:
  - attack the plant at the weakest point in its life cycle or stage of growth, and
  - prevent viable seed from being produced.
- Find out about the biology/life cycle of the weed. Your district agriculturist will be able to tell you the best height/growth stage at which a particular weed should be controlled.

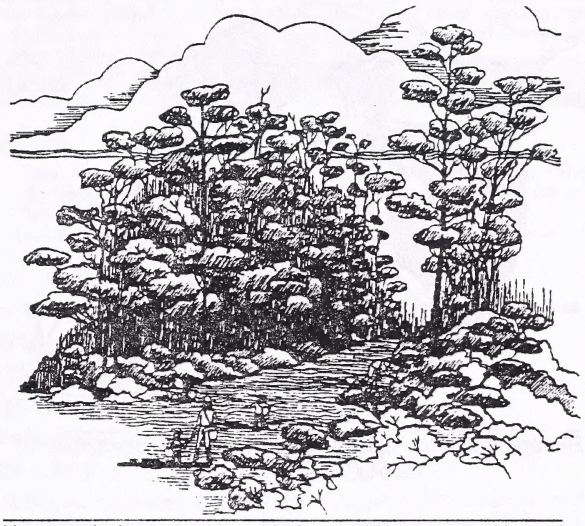
WHAT IS THE BEST METHOD FOR CONTROLLING THE WEED(S)?

It is unlikely that one method or approach will effectively control all weeds. An integrated approach that takes advantage of several methods is most successful. The following methods have proven effective, depending on factors such as: the weed species, time frame, cost and sensitivity of an area.

1. PREVENTION

Preventing weeds from becoming established following soil disturbance is the least costly means of control.

Timely intervention on adjacent lands can also prevent weeds from becoming a problem on a Natural Area.



You can help prevent weeds from taking root on Natural Areas by recording weed species present.

2. MECHANICAL CONTROL

Hand pulling, also known as grubbing, may be all that is required to control small patches of weeds. It is necessary to pull up perennial weeds every two to three weeks to starve the roots. Pulling of annual weeds prevents seed set.

Various models of hand-held and ground-driven cutting and mowing machines, in addition to the trusty machete, are used for weed control. Even your garden weedeater can prevent noxious weeds like scentless chamomile, toadflax or Canada thistle from going to seed. This could really help to prevent these weeds from spreading.

An important thing to remember when considering mowing on Natural Areas is the possible destruction of bird habitat. Early mowing can be a prime cause of nestling mortality.

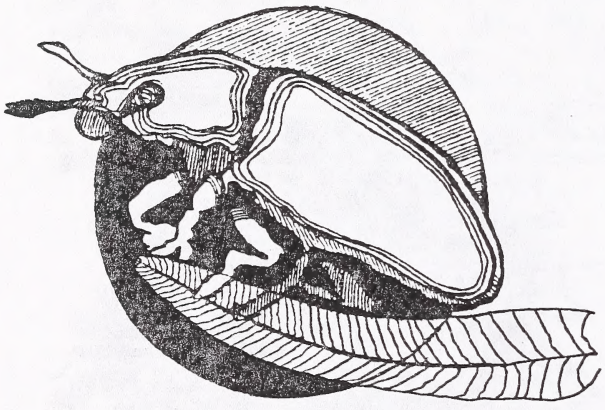
3. BIOLOGICAL CONTROL

The population of all living organisms is limited by the manner in which the environment meets their basic needs. Factors

such as climate, soil texture, nutrients, parasites, competitors and disease all serve to limit the natural populations of weeds.

Many aggressive weeds causing ecological damage came to Canada without the insects, fungi or bacteria that would normally keep them under control. There is extensive research going on in this area. A complete environmental impact assessment is conducted prior to releasing a new biological control agent. All candidate insects or pathogens are screened for potential effects on non-target plants. The reasons for their preference for a particular weed species are also investigated prior to release.

So far 30 insect species have been released in Canada as biological control agents with no known serious side effects. A number of perennial species, including nodding thistle and toadflax, have been significantly reduced in abundance using insect control. Insect agents for Canada thistle, leafy spurge and perennial sow thistle are currently being tested.



Biological control agents can be a used successfully to control weeds

4. CHEMICAL CONTROL

Since this is not the preferred method of weed control on Natural Areas, the following general comments are provided as information only. Environment Canada has a free publication entitled "Planning Considerations in Vegetation Management," which has a good summary of methods and precautions which should be taken when using chemical herbicides. This report [CP(EP)WNR88-89-8] was prepared by Pecan Resources Inc. for Environment Canada (address below) and is available upon request.

Understanding such precautions is important, especially since chemical herbicides may be used on adjacent lands and along industrial corridors on Natural Areas. Not all the herbicide applied ends up where it was intended. Herbicides can be transported from intended targets by drifting (carried by air currents), leaching (downward movement through the soil), runoff (if it rains soon after application) and root transfer (movement of systemic herbicides through connected roots, e.g., as in clonal species like poplar).

Herbicides, though less toxic than insecticides to most animals, are sometimes toxic to fish and invertebrates, which are food for other fish, birds and land animals. For this reason, provincial legislation requires that a buffer zone of unsprayed vegetation be left adjacent to waterbodies. Such zones are usually 30 m to 50 m in width.

This all adds up to using caution in the use of chemical herbicides and becoming more knowledgeable so that we can make responsible, informed decisions.

WHO SHOULD I INVOLVE IN PLANNING?

The most effective weed control is achieved when all stakeholders in an area are involved. Each situation will be unique, but the following people should be involved as necessary:

- **Volunteer Stewards** - Organize meetings; gather information and monitor success.
- **Natural and Protected Areas Staff/Public Lands** - Must always be notified about a weed problem; can help with planning.
- **Land Resource Agrologist/Public Lands** - Consult for information on soils, weed identification/biology and weed control budget information.
- **District Agriculturist/Alberta Agriculture** - Consult for weed identification, weed control publications/options.
- **Weed Inspector/Alberta Agriculture** - Consult for treatment options; weed problems on lands adjacent to Natural Areas.
- **Oil/Gas Company Representatives** - Meet with officials as necessary to discuss weed control on wellsites/pipelines/transmission lines.
- **Local Residents/Leaseholders** - Often a weed problem is community-wide. Weed control will be much more successful if all sources are identified and controlled.

We appreciate the vigilence and effort of our volunteer stewards in keeping the weeds in our Natural Areas under control. Let's use the opportunity to show our willingness to work cooperatively within our communities and to present alternatives to chemical control. Remember, an early start is very important - another reason for a spring visit to your Natural area this year!

HELPFUL CONTACTS

Conservation and Protection Service
Environment Canada
4999 - 98 Avenue
Edmonton Alberta
T6B 2X3
Phone 468-8001

Alberta Agriculture
Plant Industry Division, Crop Protection Branch
Weed Control Section
7000 - 113 Street
Edmonton Alberta
T6H 5T6
Phone 427-7098

Dr. Alec McClay, Research Scientist
Alberta Environmental Centre
P.O. Bag 4000
Vegreville, Alberta
T0B 4L0

Line drawings used with permission from the Environment Canada publication, "Planning Considerations in Vegetation Management.

PRELIMINARY CONFERENCE SCHEDULE

Friday Evening, April 27

6:00 pm Registration Commences

7:00 pm Conference Welcome

Bring your family to this special evening event to launch the first Volunteer Steward Conference. There will be a frog and toad walk, a night walk, storytelling, a campfire program and more!

Saturday, April 28

Early Morning Adventures: bird watching ramble, nature walk (mosses and ferns).

7:30 am Registration Opens

7:30 - 8:30 am Breakfast

8:30 - 9:00 am Plenary Session

1. **"Working Together for Natural Areas":** the challenges, responsibilities, and opportunities of the Natural Areas Volunteer Steward Program.

9:00 - 10:15 am Concurrent Sessions

2. **Volunteer Steward Orientation:** What are Natural Areas? What are the roles and responsibilities of volunteer stewards? New and experienced volunteers will benefit from this in-depth orientation.
3. **Developing a Site Management Plan:** Alberta Forestry, Lands and Wildlife staff will walk you through the process of how a site management plan is developed.
4. **How to Inventory a Natural Area:** Learn about inventory techniques and checklists that other stewards have developed for their sites. Samples provided.
5. **Bird Watching for Beginners:** You will learn to tune your eyes and ears to the sounds, signs and sighting of birds. Field guides and equipment will be reviewed. If you have binoculars remember to bring them along. **NOTE: This session extends to noon.**

10:15 - 10:45 am Conversation Break

10:45 - 12:00 noon Concurrent Sessions

6. **How to Inspect and Monitor a Natural Area:** You will learn what constitutes a "disturbance", what staff roles are, and you will complete a sample form used by Natural Areas to help build an accurate information base.
7. **Involving Neighbours and User Groups in Natural Areas Planning and Management:** Steward committees will present ways to involve neighbours and the public in contributing to the development of site management plans, to establish ongoing working relationships and to learn to advocate for Natural Areas.
8. **Advanced Bird Watching:** Hone your bird watching skills at this advanced workshop. Bring your questions and binoculars and be prepared to be challenged!

12:00 - 1:30 pm Lunch

1:30 - 2:00 pm Plenary Session

9. **An Introduction to the Natural Regions of Alberta** (an audio-visual presentation).

2:00 - 3:30 pm Concurrent Sessions

10. **Developing a Site Management Plan: Repeat of Session 3.**
11. **Conflict Resolution:** Opportunity or threat? Effective ways to resolve conflicts on management committees, between site users, and with neighbours. Experienced stewards will present case studies and role playing to help you explore realistic ways to turn conflicts into opportunities.
12. **Map and Air Photo Interpretation:** Mystified by these tools of the trade? Then this is the session for you! Patient leaders will guide you through the symbolic jungle so you too can decode their messages.
13. **Moss and Fern Identification:** Join this journey through the world of mosses and ferns. **NOTE: This session extends to 5:30 pm.**

3:30 - 4:00 pm Conversation Break

4:00 - 5:30 pm Concurrent Sessions

14. **Insect Identification:** After this session you will be able to identify the major types of insects. Specimens will be available for this "hands on" session.
15. **Managing Multiple-use Natural Areas**: Discuss how Natural Areas staff and stewards have worked with user groups and government agencies to identify and resolve multiple-use issues.
16. **Legal Liability:** How do stewards cope with injuries, vandalism, enforcement, public liability and other legal issues? What are the roles of stewards, societies, and the Natural Areas Program? A legal advisor will answer these questions.
17. **Managing People and Site Emergencies:** How would you evacuate an injured person from your Natural Area? How could you manage clean-up after a natural disaster? Or handle injured wildlife? These and other emergencies will be discussed.

6:15 pm Volunteer Recognition Banquet

8:00 pm Network with Stewards

There will be a "Share Fair" (displays by stewards of their areas) and the steward's slide show. Bring your favorite slides. This will be followed by special evening adventures.

Sunday, April 29

Early Morning Adventures: bird watching ramble, photography hike.

7:30 am Registration Opens

7:30 - 8:30 am Breakfast

8:30 - 9:00 am Plenary Session

18. **Natural Areas: the Next 10 Years.**

9:00 - 10:15 am: Concurrent Sessions

19. **Plant Identification:** After an indoor introduction to the basics of plant identification, we will go on a field trip to practice skills. **NOTE: This session extends to noon.**
20. **Volunteer Steward Orientation: Repeat of Session 2.**
21. **Trail Maintenance and Development:** How can trails be effectively designed, constructed, maintained and financed? A panel of experienced stewards will present the challenges of trails and show slides of existing trails.
22. **How to Inspect and Monitor a Natural Area: Repeat of Session 6.**
23. **Implementing a Site Management Plan:** The design and construction of amenities, maintenance programs, publicity, and education programs will be featured. We will tour the Sherwood Park Natural Area. **NOTE: This session extends to noon.**

10:15 - 10:45 am Conversation Break

10:45 - 12:00 noon Concurrent Sessions

24. **How to Inventory a Natural Area: Repeat of Session 4.**
25. **Managing Multiple-use Natural Areas: Repeat of Session 15.**
26. **Mammal Identification**: The mammals of Alberta, along with their habitats, will be presented during this session.

12:00 noon Conference Closing and Lunch

1:00 pm Homeward Bound or Optional Field Trip

Field trips to Natural Areas, including Beaverhill Lake. More details in the conference brochure.

WELCOME TO THE FIRST VOLUNTEER STEWARD CONFERENCE

"Working Together for Natural Areas"

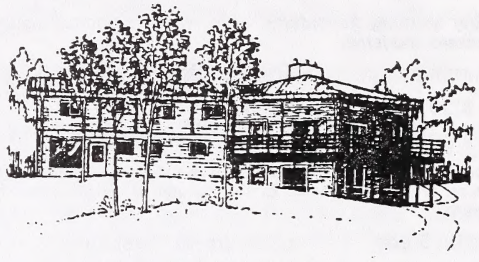
WHEN: Friday, April 27 to Sunday, April 29, 1990.

WHERE: Strathcona Wilderness Center, 40 minutes east of Edmonton.

Located 20 km (12 miles) east of Sherwood Park on Baseline Road, this unique outdoor facility contains a residential lodge, day pavilion and 12 km of trails over 202 ha (500 acres) of parkland. Nine Natural Areas, some of which will be used as field trip sites, are located within a 20-minute drive from the Strathcona Wilderness Centre.

The lodge accommodates 41 persons in dormitory-style residence rooms. Those planning to stay at the Centre should bring a sleeping bag, pillow and toiletries. Shower and bathroom facilities are located in the lodge.

Hotel accommodation is available in Sherwood Park, a 20-minute drive from the Centre. Room rates are approximately $40/night for single occupancy and $50/night for double occupancy (you will be responsible for your own booking and payment). A shuttle van service to the Strathcona Wilderness Centre will be supplied in the morning and evening from Franklin's Inn in Sherwood Park.



The Strathcona Wilderness Center will be the location for the first Volunteer Steward Conference.

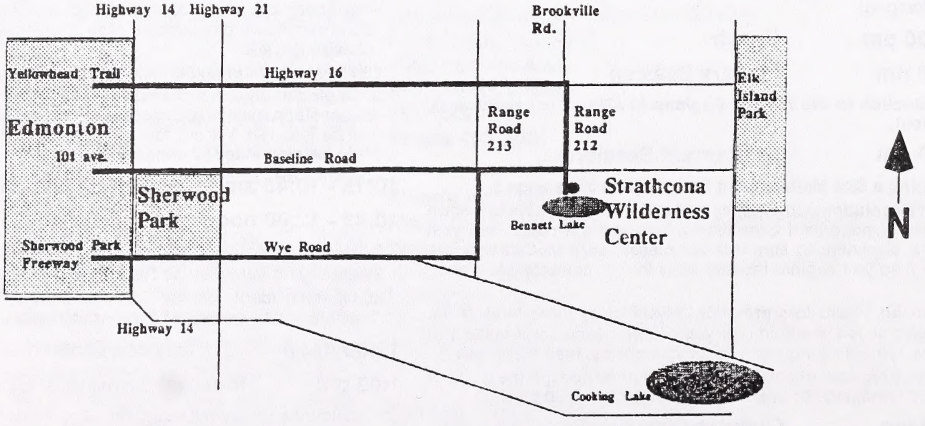
WHO CAN ATTEND? All volunteer stewards are invited regardless of whether they have been assigned a site.

WHY HAVE A VOLUNTEER STEWARD CONFERENCE?

The conference is designed to:

- provide an opportunity for volunteer stewards to meet each other and form working relationships;
- encourage the two-way sharing of information and resources between the stewards and the staff of the Natural and Protected Areas Section and other Alberta Forestry, Lands and Wildlife staff;
- provide opportunities for stewards to improve their skills and knowledge of stewardship, natural resource management and the Natural Areas Program.

Getting Here ... It's Easy! Just 20 minutes East of Edmonton on one of Highway 16, Baseline Road or Wye Road. Drive 16 km. east of Highway 21 and follow the "Strathcona Wilderness Center" Signs.



If you are interested in registering please contact Sandra Myers, Volunteer Steward Coordinator at 427-5209 for more information and a conference brochure (A Preliminary Conference Schedule is on the Reverse Side).

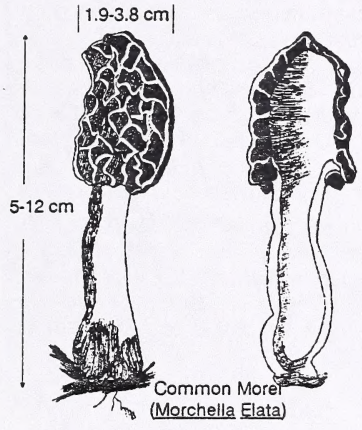
MOREL MADNESS *by Bill Richards*

Editor's Note: Localized picking of mushrooms can lead to a serious reduction in populations. You are therefore encouraged to **identify** mushrooms on Natural Areas but **picking** of them is **not advised**.
This is a general interest article on just a few members of a very large group. No single article can give you the experience and confidence to collect mushrooms for the kitchen table.
For those wishing to learn more about the subject, you may wish to contact Norman Grimes of the Edmonton Mycology Club at 486-5000 (days) or 459-8955 (evenings). In addition, some universities offer introductory classes to the mycelium world.

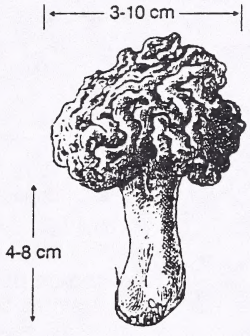
Crawling around on all fours is not the most becoming way to enjoy the outdoors, but for my wife (Diane) and I, it's how we experience it each spring. NO! - this is not some new or bizarre way to look at nature, but a very ancient activity of collecting the first wild edibles of spring, the morels and verpas. For simplicity, we will call the morel and the verpa "mushrooms," but technically, they are fungi.

The term mushroom properly refers to only the above-ground part of the plant. Its sole purpose is to release "seed" spores, which are transported to new growing sites by wind, animals or insects. The main part of the "mushroom" is an interwoven, underground web of fibres known as mycelia (if you have ever seen a mould, you have seen the mycelia).

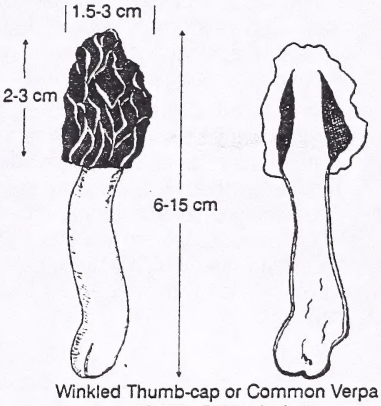
Mushrooms are primitive plants that do not make their own food because they lack chlorophyll. They get their food from organic matter, either dead or living, in or on the soil or from feces. Some even live on insects. Surprisingly, many survive on the roots of living plants, either symbiotically (where both green plant and mushroom benefit) or as parasites that eventually weaken or kill their host.



Common Morel
(Morchella Elata)



Conifer False Morel
(Gyromitra Esculenta)
Poisonous



Winkled Thumb-cap or Common Verpa
(Verpa Bohemica)

The morels and the verpas are the earliest of the edible fungi. I have found that, generally, they are most abundant in the third week of May in the greater Edmonton area, but this varies greatly, depending on ground moisture and temperature. They share several other characteristics. Their "caps" are pitted or convoluted and are darker than the pale smooth stem (stipe); the stipes are hollow and brittle. They grow in similar habitats in the boreal mixedwood, prefer a thick, deciduous leaf litter, and are very dependent on late spring snowfalls or spring rains to be produced in any number. The verpa prefer a moister site and are found in slightly lower areas, although they may be found growing side-by-side with the morel.

The main difference between the two is that the cap of the verpa fits loosely on the stipe, much like a thimble on a finger. The cap of the morel is one piece with the stem.

This group of edible mushrooms include several morel species (Morchella angusticyss, M. esculenta) and several verpa species, the most common being Verpa bohemica. However, within this family of sought-after delicacies, there are poisonous members. One of the poisonous members of this group is the conifer false morel (Gyromitra esculenta). This species is reported to appear at the same time of year as the edible morels, but I have seen false morels only in early June when there were just a few edible species left to be picked.

False morels are differentiated from the verpa by the stipe and cap, which are joined much like that of the true morel. They are characterized by a wrinkly cap, rather than the pitted cap of the true morel. In addition, false morels prefer to grow under conifers, whereas the edible morels and verpas have a stronger affinity for deciduous trees.

You should not eat any mushroom you are unsure of, nor should you eat uncooked wild mushrooms because fungal tissue is, for the most part, indigestible by humans. When collecting mushrooms for the table, all specimens should be checked, not only for identification, but also for damage, insects and age. Inferior specimens should be discarded. Then, when preparing them for the table, each and every mushroom must be reinspected, and remember the mushroom collector's credo, "if in doubt, throw it out." Mushrooms should be treated like fine wine -- they should be savoured for their flavour. More words to the wise: don't mix wild mushrooms or consume alcoholic beverages with them because there may be a chemical clash that can cause stomach upset. When eating a previously untried edible species, eat only a small amount, for even experts may discover an allergic reaction to a mushroom tried for the first time.

Remember that many terrestial plants could not thrive without mushrooms because some establish a symbiotic relationship with fungi, exchanging nutrients. Fallen trees would take far longer to decay if it were not for the decomposition brought about by fungi. Many species of mushrooms are very susceptible to overpicking, so spread your picking around, through out a number of areas and don't pick all the mushrooms you find.

For Diane and I, the springtime morel madness turns to winter sadness if we have not saved some morels for our Christmas dinner. A comprehensive reference list with information on collecting methods and identification guides is available by simply giving me a call at 427-5209.

Origional morel and verpa sketches done by Mattie Brown.

SITE PROFILE: GENESEE - A HIDDEN PARADISE

by Jamie K. McNeil, Volunteer Steward

Landscapes devoid of overpowering features, such as majestic, snow-capped mountains or a sparkling, cascading waterfall, are thought by some to be dull and uninteresting. But, ordinary and unassuming areas, when explored, can offer a whole new perspective on natural beauty. Genesee Natural Area is one such place.

As you embark down a small, overgrown cutline, you are immediately swallowed by a thick canopy of aspen-dominated forest with white spruce and balsam poplar interspersed with paper birch. It is not unusual on such a sojourn to flush a camouflaged ruffed grouse, catch the "flag" of a fleeing whitetailed deer or hear the eerie howling of a nearby coyote pack. Others more fortunate may observe a browsing moose or perhaps catch a glimpse of a bear as it slowly ambles in curiousity along the riverbank.

Of particular interest is the presence of a fossil bed with specimens that date back 60 million years. In the recent past, large numbers of amateur rockhounds collected fossils in a destructive manner. This problem seems to have been alleviated as now, please note, a permit is required for those wishing to remove fossils from the site. But as you view the slow, meandering river which snakes before you, your imagination can be filled with images of life on earth some 60 million years ago.

Genesee is relatively close to Edmonton. To get there, travel west on Highway 16 or 16X until you reach Carvel Corner (just past the Highway 43 turnoff to Grand Prairie). Then go approximately 20 km south on Secondary Highway 770. When you reach the village of Genesee, turn west for 2 km to reach the site. Another bonus is that this area contains the highest concentration of natural areas in the province. So, if you're in the neighbourhood, sites such as Burtonsville Island, Coyote Lake and St. Francis can also be visited and explored.

In the winter, Genesee Natural Area offers a quiet and solemn place in which to hike or cross-country ski. In the spring, the budding foliage and stirring of nature are a joy to behold. If you are planning a summer outing to Genesee, bring along some insect repellant. Trust me, I didn't and I still have the scars to prove it (just kidding). It also looks like there's some good fishing to be had in the North Saskatchewan River. You should employ a catch and release strategy at this particular location or you're looking to turn yourself into a mercury thermometer. (Mercury occurs naturally in the water here and accumulates in fish; eating them is not recommended.)

Undeniably, smaller areas have merit when it comes to their individual features. Their role in the larger system of protection and conservation is also invaluable. If you would like more information on becoming a steward or would like further information about the Natural Areas Program in general, please call 427-5209.

Water Shrews (continued from page 2)

locate and catch brook sticklebacks. The brook sticklebacks perhaps "help" by trying to hide on the bottom or in vegetation from where they are seized and removed from the water. The head is usually eaten first and then the water shrew grooms and dries its fur. After grooming and resting, the shrew returns for a snack, rests some more, snacks again, followed by another rest and then finishes the meal. After resting awhile, the shrew will go "fishing" again.

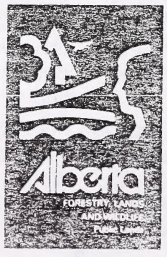
A good, balanced diet for water shrews in the winter probably includes both invertebrates and fish. In captivity, they do not appear to thrive on a diet of fish alone. About half of the wild-caught shrews examined by the author (not from Wagner!) contained fish remains (usually sticklebacks), but often with invertebrate remains as well. Water shrews were found to eat an average of 1.4 times their body weight per day in sticklebacks, which would require 10 or more fishing trips. While the water shrew is not specialized as a piscivore, it is an excellent "fisherman".

Printed on Recycled Paper

Program Notes (continued from page 2)

newsletter to your friends and/or keep it in your files for future reference (*reuse*). Perhaps most significantly, the newsletter is now printed on *recycled* paper. In the future, we hope to have all of our publications printed on recycled paper.

Alberta Forestry, Lands and Wildlife has also instituted an office paper recycling program in cooperation with Paper Chase Recycling. If you do not wish to keep or pass on your copy of the newsletter, you may return it to our office when you submit your inspection report. We are able to use all returned copies as handouts for public enquiries.



For further information on the conference please contact:

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